

Sub B1

19. (New) An exposure apparatus comprising:
a light source, which emits an exposure beam;
an optical system comprising a casing and an
optical element, said casing having a closed space and said
optical element being disposed in said casing;
a first supplier, which supplies an inert gas into
the closed space;
a second supplier, which supplies one of oxygen and
clean air into the closed space; and
a controller, which changes a wavelength of the
exposure beam between exposure of a substrate and cleaning of
the optical element.

20. (New) An apparatus according to Claim 19,
wherein said controller controls said first supplier and said
second supplier.

21. (New) An apparatus according to Claim 20,
wherein said first supplier comprises a first valve, said
second supplier comprises a second valve and said controller
controls said first valve and said second valve.

Sub B3

22. (New) An apparatus according to Claim 20,
wherein said controller controls a concentration of oxygen in
said casing.

23. (New) An apparatus according to Claim 19, further comprising a mixer which mixes one of oxygen and clean air into the inert gas.

24. (New) An apparatus according to Claim 19, further comprising a discharger which discharges the gas inside the closed space outwardly.

25. (New) An apparatus according to Claim 24, further comprising a transformer which transforms ozone remaining in the discharged gas into oxygen for reuse thereof.

26. (New) An apparatus according to Claim 19, wherein said controller changes the wavelength of the exposure beam into a wavelength region higher than an oxygen absorptivity when said second supplier supplies the oxygen.

27. (New) An apparatus according to Claim 19, wherein said controller changes the wavelength of the exposure beam to a shorter wavelength when said second supplier supplies the oxygen.

28. (New) An apparatus according to Claim 19, further comprising a laser control device which changes the emission laser wavelength region, wherein said controller controls said laser control device.

29. (New) An apparatus according to Claim 19, wherein said controller oscillates the wavelength region continuously.

30. (New) An apparatus according to Claim 19, wherein said controller controls actuation of said light source.

31. (New) An apparatus according to Claim 19, wherein said controller inserts a wavelength changing element into a path of the exposure beam.

32. (New) An apparatus according to Claim 31, wherein said wavelength changing element is a harmonic wave producing element.

33. (New) An apparatus according to Claim 19, wherein said optical system comprises one of an illumination optical system and a projection optical system.

34. (New) An apparatus according to Claim 19, wherein said light source comprises one of a light source for producing ultraviolet rays and a light source for producing X-rays.

a